

MAS Status

1/19/01

Instrument Experienced

Extreme Thermal Stress on Ferry to S. Africa
(approx. -70°C for Seven Hours)

Cause:

- Pod heaters disabled
- All System Power Shut Off Prior to Launch

Result:

- Port 3 Dewar ruptured
- Optical Degradation to Most Spectrometer and Fore-Optic Components
- Recorder Compromised

Port 3 (3-5um) Status:

- Old Dewar Not Salvageable
- New Dewar (plus spare) on Order
- Initial Report: Detector Array Not Damaged

MAS Optical Component Status:

Replacement or Re-Coating Required:

- Second Dichroic (Port 2)
- Scan Mirror
- Main Parabola
- Pfund Assembly
- Secondary Mirrors
- Port 1 Diffraction Grating – TBD

Plan for Texas Deployment (March '01)

- Install MAS Spectrometer on MASTER Fore-Optic
- Install MASTER Port 3 Dewar
- Port 4 (8-14 μ m) Inspected by Manufacturer for Anomalies

MAS Work in progress

- New Port 3 Dewar on order
- Port 4 Dewar at Manufacturer For Inspection
- Replacement Optics - Quote Pending
- Disassembly of scan mirror
- SCSII Chain Revisions

SAFARI MAS Calibration

- Calibration Hemisphere Damaged in Shipping to S. Africa (Intensity and Color Temperature Variable)
- Pre- to Post- Deployment 30" Sphere Calibration Shows Substantial Degradation (esp. in V/NIR)
- Standard Linear Degradation Model Does Not Appear to Apply
- IR Bands (Port 3 & 4) Not Affected

SAFARI MAS Calibration Plan:

- Vers. 1 (Preliminary) Calibration Based on Post-30" Only
(No Linear Degradation Model; Initially Validated at Etosha Site)
- Final Calibration May Include Degradation Model Derived From Color-Corrected Hemisphere Data & Pietersburg ASD Data
- Three Additional Field Validations To Be Processed
(Two Dates at Sua Pan, & Walvis Bay)